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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,404	05/18/2005	Arnaud Favier	123956	5998
25944	7590	09/13/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			BERNSHTEYN, MICHAEL	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/535,404

Applicant(s)

FAVIER ET AL.

Examiner

Michael Bernshteyn

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-28 is/are allowed.
- 6) ☒ Claim(s) 29 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action follows a response filed on June 27, 2006. Applicants have amended claims 16 and 29.
2. Claims 16-30 are pending.

#### ***Claim Rejections - 35 USC § 102***

3. The test of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
4. Claim 29 is rejected under 35 U.S.C. 102(e) as being anticipated by Klaerner et al. (U.S. Patent 6,716,948), for the rationale recited in paragraph 6 of Office Action dated on April 5, 2006.

#### ***Claim Rejections - 35 USC § 103***

5. The test of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klaerner et al. (U.S. Patent 6,716,948) in view of Takaki et al. (US Patent 6,359,093), for the rationale recited in paragraph 7 of Office Action dated on April 5, 2006.

#### ***Allowable Subject Matter***

7. Claims 16-28 are allowed.

The present claims are allowable over the closest reference: Klaerner et al. (U.S. 6,716,948).

Klaerner discloses polymers having controlled architectures, controlled free-radical polymerization methods for preparing such polymers, separation media prepared from such polymers, and separation applications for such media. Klaerner discloses, more specifically, non-linear polyacrylamidic polymers having useful properties, such as controlled weight-average molecular weights, narrow polydispersity indices, flow-enabling viscosities, and water- or aqueous medium-solubility or dispersability, and to flowable separation media prepared from such polymers for use in capillary electrophoresis (col.1, lines 29-42).

Klaerner does not disclose or suggest all the limitations of instant claim 1, including using an organosulfur reversible chain transfer agent, and simultaneously achieving the conversion of greater than 75% and polymerization time of less than 8 h keeping the claimed ranges of number-average molecular weight and a polydispersity index.

### ***Response to Arguments***

8. In view of Applicants' amendments of the claims 16 and 29, the rejection of the above claims under 35 U.S.C. 112, second paragraph is withdrawn.

9. Applicants traverse the rejection of claim 29 under 35 U.S.C. 102(e) as being anticipated by Klaerner et al. (U.S. Patent 6,716,948) and the rejection of claim 30 under 35 U.S.C. 103(a) as being unpatentable over Klaerner et al. (U.S. Patent 6,716,948) in view of Takaki et al. (US Patent 6,359,093). Applicant's arguments have been fully considered but they are not persuasive.

10. Applicants contend that an aspect of the claimed invention is that the polymer product has at least the following two features:

- a number-average molar weight of greater than or equal to 100,000 g/mol;
- polydispersity index of less than 1.2 for number-average molar weight less than 200,000 g/mol and less than 1.4 for number-average molar weight greater than 200,000 g/mol.

However, the combination of at least these two polymer properties is nowhere disclosed by Klaerner.

Applicants acknowledge that Klaerner discloses broad property ranges for its polymer. Thus, Klaerner discloses a polymer having a weight-average molecular weight of at least about 75,000, and a polydispersity index of not more than about 2.0 (col. 15, lines 33-41). Accordingly, the disclosure of Klaerner converts to polymers having a number-average molecular weight of at least 37,000 with a polydispersity index of not more than about 2.0. However, Klaerner's polymers having a number-average molecular weight of at least about 37,500 with a polydispersity index of not more than about 2.0, is vastly different from the claimed polymer having number-average molecular (molar) weight of greater than or equal to 100,000 and a polydispersity index of less than 1.2 or 1.4, depending upon the specific number-average molar weight value. Klaerner neither discloses the instantly claimed specific number-average molecular (molar) weight range, nor the instantly claimed specific polydispersity index ranges (pages 6-7).

11. In response to applicant's arguments it is worth to mention that Klaerner discloses the polymer comprises acrylamide-based repeat units, is at least partially water- or aqueous medium-soluble or water- or aqueous medium-dispersible, has a **weight-average molecular weight at least about 75,000** and has a **polydispersity index of not more than about 2.0**. Hence, this embodiment includes linear and non-linear polymers of higher molecular weight that have a carefully controlled chain lengths and/or architecture--therefore providing a narrower range of hydrodynamic volume (col. 15, lines 33-41).

It is noted that the limitation "weight-average molecular weight at least about 75,000" includes the polymers with weight-average molecular weight of at least 75,000 and number-average molecular weight of at least about 37,500, including all the polymers of instant claims 29 and 30 having number-average molecular weight of at least 100,000. Accordingly, the limitation "polydispersity index of not more than about 2.0" includes the instantly claimed range for specific polydispersity index within 1.2-1.4.

12. In the light of the discussion above, the rejection of claims 29 and 30 has not been withdrawn. The rejection remains in force.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

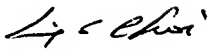
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MB  
09/11/2006

Michael Bernshteyn  
Patent Examiner  
Art Unit 1713

  
**LING-SUI CHOI**  
**PRIMARY EXAMINER**